

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Prasanna M. Shah, et al.

Docket no.: 2218CON1

Serial no.: (Unknown)

Filed : Herewith

For : SYSTEM AND METHOD FOR
SWITCHING SIGNALS OVER
TWISTED-PAIR WIRES

Art Unit : Unknown

Examiner: Unknown

MAIL STOP PATENT APPLICATION
Commissioner for Patents
Post Office Box 1450
Alexandria, Virginia 22313-1450

PRELIMINARY AMENDMENT

In the Title

Please replace title of this application "SYSTEM AND METHOD FOR SWITCHING SIGNALS OVER TWISTED-PAIR WIRES" on page 1, lines 1 and 2 of the application with the following title.

CROSSPOINT SWITCH FOR ENCODED SIGNALS
CARRIED ON UNSHIELDED WIRES

In the Specification

Please amend the specification of the application as follows.
Page 1, line 3, please insert:

This is a continuation of application Serial No.
09/226,869 filed on January 6, 1999.

Please substitute the following text for the paragraph which begins on page 7 in line 15.

A crosspoint switching matrix is adapted for switching to at least one receiver selected from a plurality of receivers one encoded signal from among a plurality of encoded signals received from a plurality of encoders. Each encoder is adapted for:

1. concurrently receiving a plurality of baseband signals from specific sources included among a plurality of sources; and
2. producing from the received signals a single encoded signal.

Each receiver is adapted for:

1. receiving the encoded signal;
2. decoding the encoded signal back into baseband format; and
3. providing a set of outputs corresponding to the baseband signals encoded into the received signal.

The crosspoint switching matrix includes a plurality of input nodes, each input node being adapted for accepting the encoded electronic signal produced by one of the encoders. The crosspoint switching matrix is capable of accepting the electronic signal from encoders which are directly coupled to the input node of the

crosspoint switching matrix via a conductor, including an unshielded cable such as a twisted pair cable, which is external to the crosspoint switching matrix. The crosspoint switching matrix also includes a plurality of output nodes, each output node being adapted for supplying receivers with encoded signals accepted by the input nodes. The crosspoint switching matrix is capable of supplying the electronic signal to receivers directly coupled to output nodes via a conductor, including an unshielded cable such as a twisted pair cable, which is external to the crosspoint switching matrix.

In an alternative embodiment the crosspoint switching matrix also includes a control system coupled to the crosspoint switching matrix. The control system is adapted for routing control signals from a remote control input to at least one source of baseband signals received by the encoders. The control signals travel from the remote control input in a direction opposite to a direction in which encoded signals travel from the crosspoint switching matrix to receivers. In this way the crosspoint switching matrix is adapted for concurrently:

1. receiving encoded signals from the plurality of encoders;
2. providing signals received from the encoders to a plurality of receivers; and

3. supplying control signals received from a remote control input to a source of baseband signals.

In the Claims

Please cancel without prejudice claims 1-7 in the application as originally filed, and substitute the following claims therefor.

8. (New) A crosspoint switching matrix adapted for switching signals received from a plurality of encoders to at least one receiver selected from a plurality of receivers:

a. each encoder being adapted:

- 5 i. for concurrently receiving a plurality of baseband signals from specific sources included among a plurality of audio/video sources; and
- ii. for producing from the received signals a single encoded signal;

10 a. each receiver being adapted:

- i. for receiving an encoded signal;
- ii. for decoding the encoded signal back into baseband format; and
- 15 iii. for providing a set of audio/video outputs corresponding to the baseband signals encoded into the received signal;

the crosspoint switching matrix comprising:

a. a plurality of input nodes, each input node being adapted for accepting the encoded electronic signal produced by one of the encoders, the encoder from which the electronic signal is accepted being directly coupled to the input node of the crosspoint switching matrix via a conductor capable of including an unshielded cable, including a twisted pair cable, which is external to the crosspoint switching matrix; and

b. a plurality of output nodes, each output node being adapted for supplying the receivers with one of the encoded signals accepted by one of the input nodes, the receiver to which the electronic signal is supplied being directly coupled to the output node of the crosspoint switching matrix via a conductor capable of including an unshielded cable, including a twisted pair cable, which is external to the crosspoint switching matrix;

whereby the crosspoint switching matrix is adapted for concurrently receiving encoded signals from the plurality of encoders, and for concurrently providing signals received from the encoders to a plurality of receivers.

9. (New) The crosspoint switching matrix of claim 8 further comprising:

c. a local control coupled to the crosspoint switching matrix; and

d. a display coupled to the crosspoint switching matrix.

10. (New) The crosspoint switching matrix of claim 8 further comprising a control system coupled to the crosspoint switching matrix.

11. (New) The crosspoint switching matrix of claim 10 wherein the control system comprises:

control circuitry coupled to the crosspoint switching matrix;

5 interface circuitry coupled between the crosspoint switching matrix and the conductors; and

a modem coupled between the control circuitry and a corresponding modem of at least one of the plurality of receivers.

12. (New) The crosspoint switching matrix of claim 11 wherein the control system includes a computer interface coupled to the control circuitry, and local control coupled to the control circuitry.

13. (New) A crosspoint switching matrix adapted for switching signals received from a plurality of encoders to at least one receiver selected from a plurality of receivers:

a. each encoder being adapted:

5 i. for concurrently receiving a plurality of baseband signals from specific sources included among a plurality of sources; and

- ii. for producing from the received signals a single encoded signal;
 - 10 a. each receiver being adapted:
 - i. for receiving an encoded signal;
 - ii. for decoding the encoded signal back into baseband format; and
 - iii. for providing a set of outputs corresponding to the
 - 15 baseband signals encoded into the received signal;
- the crosspoint switching matrix comprising:
- a. a plurality of input nodes, each input node being adapted for accepting the encoded electronic signal produced by one of the encoders, the encoder from which the electronic signal is
 - 20 accepted being directly coupled to the input node of the crosspoint switching matrix via a conductor capable of including an unshielded cable, including a twisted pair cable, which is external to the crosspoint switching matrix; and
 - b. a plurality of output nodes, each output node being
 - 25 adapted for supplying the receivers with one of the encoded signals accepted by one of the input nodes, the receiver to which the electronic signal is supplied being directly coupled to the output node of the crosspoint switching matrix via a conductor capable of including an unshielded cable, including
 - 30 a twisted pair cable, which is external to the crosspoint switching matrix; and
 - c. a control system coupled to the crosspoint switching matrix, the control system routing control signals from a

remote control input to a source from which an encoder
35 receives baseband signals, wherein the control signals travel
from the remote control input in a direction opposite to a
direction in which encoded signals travel from the crosspoint
switching matrix to receivers;

whereby the crosspoint switching matrix is adapted for concur-
40 rently receiving encoded signals from the plurality of encoders,
for concurrently providing signals received from the encoders to a
plurality of receivers, and for concurrently supplying control
signals from a remote control to a source from which an encoder
receives baseband signals.

14. (New) The crosspoint switching matrix of claim 13
wherein the control signals select the source to which the control
system routes control signals.

15. (New) The crosspoint switching matrix of claim 13
wherein the control system comprises:

control circuitry coupled to the crosspoint switching
matrix;

5 interface circuitry coupled between the crosspoint
switching matrix and the conductors; and

a modem coupled between the control circuitry and a
corresponding modem of at least one of the plurality of receivers.

16. (New) The crosspoint switching matrix of claim 15 wherein the control system includes a computer interface coupled to the control circuitry, and local control coupled to the control circuitry.

In the Abstract

Please delete the text of the "Abstract Of The Disclosure" in the patent application as originally filed, and substitute therefor the following abstract.

A crosspoint switching matrix receives signals via unshielded cables from a plurality of encoders, and directs the signals via unshielded cables to a plurality of receivers. Each encoder receives a plurality of baseband signals for encoding into a single encoded signal. Each receiver decodes the encoded signal from the crosspoint switching matrix to baseband format, and provides a set of outputs corresponding to the baseband signals.

REMARKS

Amendment Of The Title

The title has been amended to more accurately describe the subject matter encompassed by claims presented in this preliminary amendment.

Amendments To The Specification

Page 1 of the specification is amended in accordance with Manual of Patent Examining Procedure ("MPEP") § 201.11.

A paragraph which begins on page 7 in line 15 is amended to more accurately describe the subject matter encompassed by claims presented in this preliminary amendment.

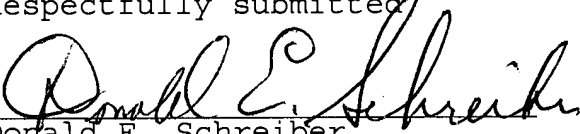
Amendment Of The Abstract

The abstract has been amended to more accurately describe the subject matter encompassed by claims presented in this preliminary amendment.

Conclusion

The Applicant respectfully requests entry of the amendments set forth above, and prompt examination and passage to issue of the application as so amended.

Respectfully submitted



Donald E. Schreiber
Reg. No. 29,435

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Donald E. Schreiber
A Professional Corporation
Post Office Box 2926
Kings Beach, CA 96143-2926

Telephone: (530) 546-6041

Attorney for Applicants